

O'Dive VISION

O'DIVE VISION TECHNOLOGY Desaturation Monitoring for Research, Education and Training Purposes

An augmented and connected subclavian Doppler technology specifically designed for the self-monitoring of divers at the dive site.

- **Specific**

O'Dive VISION is based on vascular microbubble sensor (ultrasonic Doppler technology) that is the result of knowledge developed during 10 years of R&D by Azoth Systems in collaboration with research laboratories and scuba diving safety professionals. It has been shaped by years of testing in contact with users, with the publication of several patents.



- **Augmented**

O'DIVE VISION has been entirely developed to enhance the quality of signals collected at the dive site for professional as for non-experts and divers themselves thanks to a software displaying the signal spectrogram on a tablet, the capacity to hear the signal (headphones) and an automated and real time analysis process checking the quality level of the recordings.



- **Connected**

O'DIVE VISION is connected to a data server with specific functions to build data collection based on automated (date, time, left, right) or self-referenced signals recordings, depending on user's selection. In option and for specific studies, it is also possible to benefit from a program including a quotation of signals by experts and global statistics on the data.

This compact and robust sensor and its accessories are provided in a waterproof case that can easily be taken on the field.

How does the technology work?

1. After the surface, the sensor is placed for 20 seconds (this parameter can be adapted as necessary) under the left and then right clavicles to record the signals on the O'Dive VISION app.
During the recordings, the venous flow can be visualized and listened to in real-time.
2. Additional information concerning the hyperbaric exposure can be input and linked to the signals (in option, the system can be proposed with data-loggers).
3. The signals and related information are uploaded into O'DIVE VISION servers.
4. The acoustic files can be accessed anytime from a server access.

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Dive_20200623190639_pastor/	11-Sep-2020 08:56
Dive_20200722103258_jean_luc/	11-Sep-2020 08:56
Dive_20200903112004_midday_dive/	11-Sep-2020 08:56

[Regenerate](#)



Options details

Standard offer	O'Dive Vision Pack	PRO 500m Doppler sensor with Tablet and accessoires in waterproof case.	Contact us for a customized quotation
	Individual Server Access	Access and recording of the raw acoustic signals	
Optional offer	Raw data analysis	Certified bubble rating and analysis of the raw signals.	
	Dive computer	Dive computer in data logger mode to associate dive profiles with micro-bubble signals	

References:

- (1) - Hugon J. et al. "Reliability of venous gas embolism detection in subclavian area for decompression stress assessment following scuba diving", *Diving and Hyperbaric Medicine* 2018; 48 (3): 132-140.
- (2) - Hugon J. "Decompression models: review, relevance and validation capabilities", *Undersea Hyperbaric Medicine* 2014; 41(6): 531-556.
- (3) - Gardette B. "Correlation between decompression sickness and circulating bubbles in 232 divers", *Undersea Biomedical Research*, vol. 6, No. 1, 1979.
- (4) - Eftedal O.S., Tjelmeland H., Brubakk A.O. "Validation of decompression procedures based on detection of venous gas bubbles: a Bayesian approach". *Aviation, Space and Environmental Medicine* 2007; 78: 94-99.
- (5) - Nishi R.Y., Eatock B.C. "The role of bubble detection in table validation". In "Validation of decompression tables. The 37th Undersea and Hyp. Medical Society Workshop": Schreiner and Hamilton eds. 1989; 133-138.
- (6) - Jones A.D., Miller B.G., Colvin A.P. "Evaluation of Doppler monitoring for the control of hyperbaric exposure in tunneling", *Research Report RR598. UK Health and Safety Executive*; 2007.

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